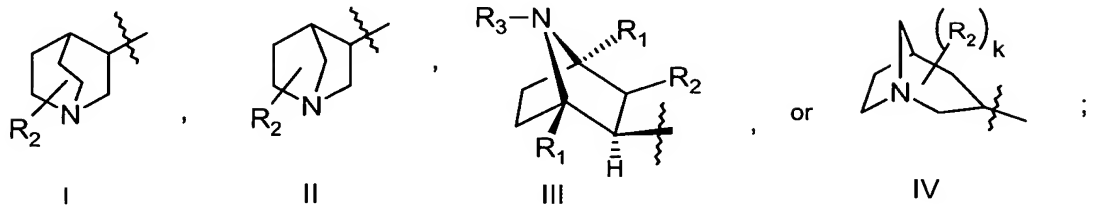
What is claimed:

1. A compound of Formula I:

Azabicyclo-N(H)-C(=O)-W^0

Formula I

wherein Azabicyclo is



I II III IV

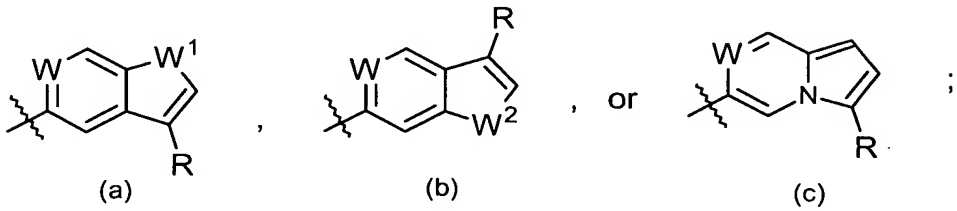
Each R_1 is independently H, alkyl, or substituted alkyl;

Each R_2 is independently H, alkyl, or substituted alkyl;

k is 1 or 2, provided that one R_2 is other than H when k is 2;

R_3 is H, alkyl, or an amino protecting group;

W^0 is



(a) (b) (c)

W is CH or N;

W^1 is O, N(R_4), N(C(O)R_4), or S;

W^2 is O, N(R_4), N(C(O)R_4), or S;

R is H, F, Cl, Br, I, alkyl, substituted alkyl, or alkynyl;

Each R_4 is independently H or alkyl optionally substituted where valency allows with up to 3 substituents independently selected from -OH, -CN, NH_2, -NO_2, -CF_3, F, Cl, Br, or I;

and pharmaceutically acceptable salts thereof.

2. The compound of claim 1, wherein R_2 is lower alkyl or substituted lower alkyl.

3. The compound of claim 2, wherein Azabicyclo is I.

4. The compound of claim 2, wherein Azabicyclo is II.

5. The compound of claim 2, wherein Azabicyclo is III.

6. The compound of claim 5, wherein each R_1 is independently H, lower alkyl, or lower substituted alkyl.

7. The compound of claim 6, wherein R_3 is H, or lower alkyl.

8. The compound of claim 6, wherein R_3 is an amino protecting group.

9. The compound of claim 2, wherein Azabicyclo is IV.

10. The compound of claim 9, wherein k is 1.

11. The compound of claim 2, wherein R is F, Cl, Br, I, lower alkyl, lower substituted alkyl, or lower alkynyl.

12. The compound of claim 11, wherein W is CH.

13. The compound of claim 12, wherein the compound is

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]-3-bromo-1-benzofuran-5-carboxamide

N-[(3*S*)-1-azabicyclo[2.2.2]oct-3-yl]-3-bromo-1-benzofuran-5-carboxamide

N-[(3R)-1-azabicyclo[2.2.2]oct-3-yl]-3-isopropyl-1-benzofuran-5-carboxamide

N-[(3S)-1-azabicyclo[2.2.2]oct-3-yl]-3-isopropyl-1-benzofuran-5-carboxamide

N-[(1S, 2R, 4R)-7-azabicyclo[2.2.1]hept-2-yl]-3-isopropyl-1-benzofuran-5-carboxamide, or a pharmaceutically acceptable salt thereof.

14. The compound of claim 11, wherein W is N.

15. The compound of claim 14, wherein the compound is

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]thieno[3,2-c]pyridine-6-carboxamide

N-[(3*S*)-1-azabicyclo[2.2.2]oct-3-yl]thieno[3,2-c]pyridine-6-carboxamide

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]-3-chlorofuro[2,3-c]pyridine-5-carboxamide

N-[(3*S*)-1-azabicyclo[2.2.2]oct-3-yl]-3-chlorofuro[2,3-c]pyridine-5-carboxamide

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]-3-bromofuro[2,3-c]pyridine-5-carboxamide

N-[(3S)-1-azabicyclo[2.2.2]oct-3-yl]-3-bromofuro[2,3-c]pyridine-5-carboxamide

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]-3-bromothieno[2,3-c]pyridine-5-carboxamide

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]-6-bromopyrrolo[1,2-*a*]pyrazine-3-carboxamide

N-[(3*R*)-1-azabicyclo[2.2.2]oct-3-yl]-6-ethynylpyrrolo[1,2-*a*]pyrazine-3-carboxamide, or a pharmaceutically acceptable salt thereof.

16. A method for treating a disease or condition in a mammal, wherein the α7 nAChR is activated and the 5-HT_3 receptor is inactivated comprising administering to a mammal a therapeutically effective amount of compound of claim 1.

17. The method according to claim 16, wherein the disease or condition is schizophrenia or psychosis.

18. The method according to claim 17, wherein the mammal would receive symptomatic relief from the administration of a therapeutically effective amount of α7 nAChR agonist/5-HT_3 antagonist and an anti-psychotic agent for a therapeutically effective interval.

19. The method according to claim 16, wherein the disease or condition is cognitive and attention deficit symptoms of Alzheimer's, neurodegeneration associated with diseases such as Alzheimer's disease, pre-senile dementia, senile dementia, traumatic brain injury, behavioral and cognitive problems associated with brain tumors, or Parkinson's disease.

20. The method according to claim 16, wherein the disease of condition is amyotrophic lateral sclerosis, AIDS dementia complex, dementia associated with Down's syndrome, dementia associated with Lewy Bodies, Huntington's disease, attention deficit disorders, attention deficit hyperactivity disorder, depression, anxiety, general anxiety disorder, post traumatic stress disorder, mood and affective disorders including disruptive and oppositional conditions, borderline personality disorder, panic disorder, tardive dyskinesia, restless leg syndrome, Pick's disease, dysregulation of food intake including bulemia and anorexia nervosa, withdrawal symptoms associated with smoking cessation and dependant drug cessation, Gilles de la Tourette's Syndrome, age-related macular degeneration, optic neuropathy, symptoms associated with pain, chemotherapy-induced emesis, migraine, fibromyalgia, irritable bowel syndrome, or diarrhea associated with carcinoid syndrome.

21. The method according to claim 20, wherein the disease or condition is chemotherapy-induced emesis, migraine, fibromyalgia, irritable bowel syndrome, diarrhea associated with carcinoid syndrome, schizophrenia, anxiety, psychosis, restless leg syndrome, pain, glaucoma, age-related macular degeneration, diabetic retinopathy, and withdrawal associated with ceasing the use of drugs, cigarettes, or alcohol upon which one is dependent.

22. The method according to claim 21, wherein the disease or condition is chemotherapy-induced emesis, migraine, fibromyalgia, irritable bowel syndrome, diarrhea associated with carcinoid syndrome, restless leg syndrome, or withdrawal associated with ceasing the use of drugs, cigarettes, or alcohol upon which one is dependent.

23. The method according to claim 22, wherein the disease or condition is chemotherapy-induced emesis, migraine, fibromyalgia, irritable bowel syndrome, or diarrhea associated with carcinoid syndrome.

24. A pharmaceutical composition comprising a compound of claim 1 and a pharmaceutically acceptable excipient, and optionally an anti-psychotic agent.

25. The pharmaceutical composition according to claim 24, wherein said compound and said agent are to be independently administered rectally, topically, orally, sublingually, or parenterally for a therapeutically effective interval.

26. The pharmaceutical composition according to claim 24, wherein said compound is administered in an amount of from about 0.001 to about 100 mg/kg of body weight of said mammal per day.

27. The pharmaceutical composition according to claim 24, wherein said compound is administered in an amount of from about 0.1 to about 50 mg/kg of body weight of said mammal per day, or any range therein.

28. The pharmaceutical composition according to claim 24, comprising a compound of claim 1 and a pharmaceutically acceptable excipient.

29. The pharmaceutical composition according to claim 28, wherein said compound is administered rectally, topically, orally, sublingually, or parenterally for a therapeutically effective interval.

30. The pharmaceutical composition according to claim 28, wherein said compound is administered in an amount of from about 0.001 to about 100 mg/kg of body weight of said mammal per day.

31. The pharmaceutical composition according to claim 28, wherein said compound is administered in an amount of from about 0.1 to about 50 mg/kg of body weight of said mammal per day, or any range therein.